CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.06/KRIDL/WMM/Gradation/2014-15 05.07.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to roads and drains at Jems Layout in Ward No.06, Dasarahalli Village Limits, BBMP, Bangalore.

Reference : AEE/BTP/(WO)/395/2014-15 Dated: 16.06.2014

Date of Testing : 05.07.2014

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **25500**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	895	895	3.5	96.5	95-100
22.4	5430	6325	24.8	75.2	60-80
11.2	5810	12135	47.6	52.4	40-60
4.75	4100	16235	63.7	36.3	25-40
2.36	3855	20090	78.8	21.2	15-30
0.600	2545	22635	88.8	11.2	8-22
0.075	2580	25215	98.9	1.1	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

Assistant Executive Engineer
Byatarayanapura Sub Division
B.B.M.P, Bangalore

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.06/KRIDL/SDBC/Bitumen/2014-15 17.07.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP,
AGENCY	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	Improvements to roads and drains at Jems Layout in Ward No.06, Dasarahalli Village Limits, BBMP, Bangalore.
REFERENCE	AEE/BTP/(WO)/395/2014-15 Dated: 16.06.2014
SAMPLE I/D	Roads and drains Jems Layout in Ward No.06, BBMP, Bangalore.
DATE OF TESTING	17.07.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	473	476.5
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	27	23.50
7. Bitumen content in %	5.40	4.70
8. Average	**5.05**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	36.87	7.79	7.79	92.21	90-100
4.75	261.3	55.24	63.04	36.96	35-51
2.36	55.48	11.73	74.77	25.23	24-39
1.18	40.56	8.58	83.34	16.66	15-30
0.3	25.86	5.47	88.81	11.19	9-19
0.075	27.89	5.90	94.71	5.29	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	27.85	5.57	5.57	94.43	90-100
4.75	244.8	48.96	54.53	45.47	35-51
2.36	91.36	18.27	72.80	27.20	24-39
1.18	52.64	10.53	83.33	16.67	15-30
0.3	34.52	6.90	90.23	9.77	9-19
0.075	25.76	5.15	95.39	4.61	3-8

Note:

Þ This test report should not be reproduced except in full, without written approval of the laboratory.

Þ The results indicated above are based on the tests carried out on the samples received in the laboratory.

Þ Any Query regarding the report must be reported within 15 days from the date of testing.

Assistant Executive Engineer
Byatarayanapura Sub Division
B.B.M.P. Bangalore

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.06/KRIDL/CUBE/2014-15

25.07.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division,, BBMP,
Agency	: **Technical Manager,** KRIDL, Bangalore.
Name of the work	: Improvements to roads and drains at Jems Layout in Ward No.06, Dasarahalli Village Limits, BBMP, Bangalore.
Reference	: AEE/BTP/(WO)/395/2014-15 Dated: 16.06.2014
Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	18.07.2014	25.07.2014	8.149	353.2	15.70
2	18.07.2014	25.07.2014	8.236	360.4	16.02
3	18.07.2014	25.07.2014	8.397	368.5	16.38

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

Assistant Executive Engineer
Byatarayanapura Sub Division
B.B.M.P. Bangalore

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.